181 and not caused by a state of laziness, for although they would not
565 consider working the land at any price, they would not mind traveling thousands of kilometers under often difficult and quite dangerous conditions to go pillage opposing tribes. Once back in camp, they intend to lead a life free from any material cares, shifting the burden to their vassals.

422 They entrust the keeping of the captured herds to the Imrad,
565 reclaiming the beasts from them when they need them and the necessary usufruct for their food. For themselves, they keep only
[231 mounts for war and for transporting household objects and are content
234] with small herds of goats with only the number of head strictly necessary to assure their daily milk needs. In the same way, they
[567] do not own many slaves of their own, for the latter would make so many months to feed, which they are wary of.

565 Although they rely on their Imrad for everything, they do not abuse them, for, as a Tuareg proverb says, "we must not kill the camel which feeds us," and their demands always take into account the wealth and the possibilities of the moment.

566 Every year the Imochar levy a vassalage tax called a tioussé
631 on the Imrad. This tax, fixed for each tribe, includes an annual
651 contribution of a certain number of head of livestock, loads of grain, miscellaneous items /160/ waterskins, tent stakes, etc.), [643] tanned hides, butter, etc. In principal it is invariable and paid to the aménokal who disposes of it as he wishes, making allowances for the needs of the Imochar.

643 The aménokal leaves the animals which he levies under the
651 management of the Imrad, who furnish him the usufruct from them.

Individual rights of Imochar over Imrad do not exist in principal.
565 Actually they do exist when a man is the last representative of a
631 tribe and levies for himself the rights falling to his tribe.
651 On the other hand, some undertake to make small levies on the Imrad; the latter never refuse. And we must say in defense of the nobles that they treat their Imrad quite generously when a fortunate raid makes them temporarily well off.

631 They did not take part in the revolt of 1916-1918. But since
[69] they left the environs of Kidal in spite of the order which had been given them to remain there, they were overtaken and raided by the column of Captain Depommier in the outskirts of Tamaïa.

565 The Iklan-en-Taousit. -- The Iklân-en-Tâousit, still called
644 Kel Koas, were probably former servants of the Imenân; /198/ they
631 made up the sultan's guard and were still dependent on his command at the end of the last century.

Their name means "servant of the tribe." They are said to be
[184] of low birth, and unlike all the other Tuareg, they have no aversion
[241] to working the land. They contract alliances with the people of the Djanet oasis.

631 They are subdivided into Iklân Settafen and Iklân Mellen, and
[62] they include about 180 people, some 60 of them men.

[23] They own about 250 camels and 400 goats which are grazed in the Lower Ahaggar, in the Tâhalra, and in the region of Silet-Âbalessa, as well as in the northeast of the Adrar near Tin Zaouaten.

Much interested in cultivation, they own gardens in the centers
[24] of Tigeneouin, Âbalessa, and Tifert, as well as in the little palm
423 grove at Tibeghîn, beside Silet.

[669] During the revolt of 1916-1918, they did not do anything to speak of.

[648] Today they furnish a good part of our mounted troupe.

The Issekkemaren. -- The Issekkemaren, whose name is
563 synonymous with "mixed," were probably from Arab fathers and
631 Tuareg mothers.

They are subdivided into the following eight tribes:

Iheiaouen Hâda
Kel In Rhar'
Kel Tâfedest
Kel Immîdir
Kel Tâzoûlet
Kel I-n-Toûnîn
Kel Téroûrirt
Kel Ouhet

1:Lhote--66b E-5 (1929-1940) 1944 MS25 Tuareg MS25

Plate XII

Hunting with dogs is common among the Tuareg, who use saluki something like Arabian greyhounds for the purpose. Their eklan /Iklan? Ed./ are often famous hunters. In this photograph we see one of them holding two dogs on a leash and getting ready to go track wild sheep.

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Besides hunting with dogs, the Tuareg engage in trapping. Here we see a trap with radial points being set. The lasso is being tied to a big tree branch sunk in the ground and hidden by a layer of sand.

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224 Among the Tuareg hunting is the business of a few men, a few specialists who have made it their profession; however, we see a large proportion of Iklan who seem to have more aptitude and more taste for hunting than their masters. There is certainly an atavistic character in this, a vestige of ancestral mores influenced by the original forest environment, where hunting was most often the basis of human activity. But it is nonetheless true that many Tuareg are very good hunters. The most renowned seem to be among the Issekkemâren and the Dăg Răli.

Hunting with hounds is the most popular. They hunt wild sheep and gazelles with saluki-type greyhounds, who serve at the same time as camp dogs /241/ for the Tuareg. These animals, who stand tall, belong to a race halfway between the Kabyle dog and the Berber saluki and must also possess jackal blood. They are particularly suited for running and have innate talent for hunting.

The hunter's job is to track down the animal, to succeed in discovering him, either grazing or in his lair, and to set the dogs on him at the propitious moment when he does not expect it and at a suitable distance. An epic battle between the animal and the dogs sometimes results from this; often the battle necessitates the man's intervention, for example when there is a wild sheep which does not hesitate to confront its assailants. The hunter, who is usually armed with a long javeline with a wooden shaft, then tries to stick his weapon in the animal's body and kill it. When it is a question of gazelles, he only needs let the dogs alone. If they can catch it, the animal will be quickly neutralized by the powerful jaws of the saluki.

Beside the common hunting with hounds, the Tuareg engage in trapping, which is a lazy method of hunting. It is all the more appreciated in the Sahara because game is rare and wary, and a certain amount of luck is always involved in capturing it.

The Ihăggaren use two types of traps: traps with radial points and torsion traps in the shape of an arc.

2: Briggs E-4, 5 (ca. 1956) 1958 MS25 Tuareg MS25
Hoggar

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A Targui noble of the Ahaggar, beside his tent. (Photograph by L. C. Briggs.)

[Frontispiece]

565 642 this by peaceful means, at least again in theory. Ancient Egyptian records tell of a Libyan chieftain, Meryey who was peacefully deposed and replaced by a younger brother following a disastrous defeat in battle (Bates, 1914, pp. 114–15, 218 and 221). It is some of the vassal clans that are the biggest numerically and also the richest on a *per capita* basis; and if vassal clansmen pay tribute to their noble "masters" it is only because they choose to do so, because they find it in their interest to keep the nobles on their payroll so to speak. Thus the Tuareg government of the Ahaggar is in fact a kind of republic and not a real monarchy or true military aristocratic autocracy at all.

233 **Livestock.** Herds of camels and flocks of hairy sheep and goats constitute the bulk of the capital investment and so form the primary basis of Tuareg economy in the Ahaggar. The quantity and composition of the total livestock investment has been variously estimated, but the following rough approximations are probably not far from the true figures: camels—12,000, sheep—2,000, goats—20,000, donkeys—5,000 and cattle (zebus)—300 or thereabouts. Donkeys, as we have seen, are unproductive [231] except as beasts of burden, and the cattle are so few as to be of negligible importance. Only some 4,500 camels are actually kept in the Ahaggar while the rest are put out to pasture in the Tamesna region on the northern edge of the Sudan, roughly half way between the Aïr and the Niger Bend. Most of the sheep too are pastured outside the Ahaggar proper, mainly in the country around Tin Zaouaten, southwest of the Ahaggar and northwest of the Tamesna.

235 262 The Haratin of the Ahaggar keep chickens, but only the eggs are eaten as a rule. The Tuareg eat neither eggs, fowl nor fish, but we will discuss this further in the section on *Nomad Diet* in the following chapter.

232 It has been said that the Tuareg have no special breed of riding camels but that likely looking animals are picked out early and given special training for use as mounts. The fact remains, however, that the young of famous stud camels are always the preferred choice, and these animals are specially marked shortly after birth. The method of marking consists of pinching up three small folds of skin in a row, about 2 to 3 inches apart, along

2: Briggs E-4, 5 (ca. 1956) 1958 MS25 Tuareg MS25
Hoggar
[P. 235]
[Pp. 230-234 not processed]

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Fig. 20. a, Bey ag Akhamouk, heir apparent (and now paramount chief) of the Ahaggar Tuareg, with one of the last horses of the central Sahara.

2: Briggs E-4, 5 (ca. 1956) 1958 MS25 Tuareg MS25
[P. 241] Hoggar

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b

Fig. 26. Tuareg of the Ahaggar. *a*, Camel Corps soldiers. *b*, A young noble of the Kel Rela Tribe. (Photographs: *a*, by A. J. Weber; *b*, by L. C. Briggs.)

tanned and sewed together. The assemblage of these hides [281] constitutes the cover, the essential part of the tent, and is 342 called "ehakit" ⵄⵀⴰⴽⵉⵜ .

The tent is supported by a central master beam called "tamankaït" ⵜⴰⵎⴰⵏⴽⴰⵢⵜ .

A pole, "idjem" ⵉⴷⵊⴻⵎ , is placed at the entrance of the tent and is flanked right and left by poles called "madar'en" ⵎⴰⴷⴰⵔⵄⴻⵏ . /26/

Other poles are used to hold up the edges: these are the "tissedass" ⵜⵉⵙⵙⴻⴷⴰⵙⵙ . The little pegs that hold the tent to the ground are called "tisselitaï" ⵜⵉⵙⵙⵍⵉⵜⴰⵢ . Sometimes bows are also used, called "adjedjou" ⴰⴷⵊⴻⴷⵊⵓ , plural "idjedjan" ⵉⴷⵊⴻⴷⵊⴰⵏ .

The tent is surrounded by mats of "afezzou" ⴰⴼⴻⵣⵣⵓ [285 (Panicum turgidum, Graminaceae), called "asabar" ⴰⵙⴰⴱⴰⵔ 824] plural "isebran" ⵉⵙⴻⴱⵔⴰⵏ , which are pulled back in the day and drawn close at night, to close the tent.

In the tent one finds first that which concerns water, that 352 is, waterskins, "abeïor'" ⴰⴱⴻⵉⵓⵔ , plural "ibiyar'" 415 ⵉⴱⵉⵢⴰⵔ , hung on forked sticks, "tidjettaouin" ⵜⵉⴷⵊⴻⵜⵜⴰⵓⵉⵏ . They are filled by means of a funnel, "asegueffi" ⴰⵙⴻⴳⵓⴻⴼⴼⵉ , plural "isegueffa" ⵉⵙⴻⴳⵓⴻⴼⴼⴰ . To water the camels, the 231 Tuareg use troughs of hide supported by hoops at the top and called "tafaraout" ⵜⴰⴼⴰⵔⴰⵓⵜ , plural "tiferouin" ⵜⵉⴼⴻⵔⵓⵉⵏ . They also use these troughs for the harvest of "toulloult" grain 243 (Arthraterum pungens, Graminaceae) or of "afezzou" (Panicum turgidum, Graminaceae).

For milk and butter, they have a waterskin for milk, 415 "tanouart" ⵜⴰⵏⵓⴰⵔⵜ , plural "tinouarin" ⵜⵉⵏⵓⴰⵔⵉⵏ , and a kind of porous water jug made of a hollowed gourd and called "az'enou" ⴰⵣⴻⵏⵓ . To ladle the milk, serve it or pour it, they use a wooden vessel with one handle called "asoukal" ⴰⵙⵓⴽⴰⵍ . To store and transport melted butter, "oudi," they have waterskins of various shapes, the most common being the one called "tahattint" ⵜⴰⵀⴰⵜⵜⵉⵏⵜ , but they also sometimes [281] use the tanned hide of a camel's thigh. /27/

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To feed young camels and lambs, they use a kind of 415
nursing bottle of wood shaped like a cup equipped with a tube.
This utensil is called "ar'alala" ⵄⵍⵍⵍⵉⵍⴰ .

For dishes, one finds in the tent wooden bowls of all sizes, 415
called "akous" ⴰⴽⵓⵙ , plural "ikassen" ⵉⴽⴰⵙⵙⴻⵏ ,
large wooden dishes, "tar'elalt" ⵜⴰⵄⵍⵍⴰⵍⵜ , and smaller dishes
used as plates and called "tar'ehout" ⵜⴰⵄⵀⵓⵜ , plural ⵜⵉⵄⵀⵓⵜ
"tireha" ⵜⵉⵔⵉⵀⴰ . To ladle milk or gruel, the Tuareg use
a large ladle, "temoulat" ⵜⴰⵎⵓⵍⴰⵜ , plural "timoulatin"

[361]

Dautheville

Tuareg Camp at Tazerouk

ⵜⴰⵎⵓⵍⴰⵜ , and for eating they have ordinary wooden spoons
called "tesoukalt" ⵜⵙⵓⴽⴰⵍⵜ , plural "tsoukaline" ⵜⵙⵓⴽⴰⵍⵉⵏ .

To separate the grains of "toulloult" and "afezzou" from 252
their hulls, they use small trays of afezzou called "tissiit" 415
ⵜⵉⵙⵙⵉⵜ , plural "tissiin" ⵜⵉⵙⵙⵉⵏ .

They also use a great deal the wooden mortar, "akabar" 415
ⴰⴽⴰⴱⴰⵔ , with its pestle, "ihar'en" ⵉⵀⴰⵔⵏ .

Finally, they have hide sacks to hold dates or grains, which 281
they call "adjera" ⴰⴷⵊⴻⵔⴰ , plural "idjerouen" ⵉⴷⵊⴻⵔⵓⵏ 415

All the above utensils are made of the wood of the 415
"teborak" (Balanites aegyptiaca, Simaroubaceae) and of the 824
abser', or "tamat," (Acacia arabica).

The negroes and negresses are well treated by the Tuareg, who do not impose hard labor upon them. The negroes are primarily busy with the flocks, which they drive to pasture and water. The negresses are concerned with the kitchen; they go after water and take care of the children.

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Tuareg Watering their Sheep at the Tin Zaouaten Well

Negroes and negresses also gather the harvest of "toulloult" and "afezzou" grains, but this is more fun than work, for everyone takes part in it with them, in gay groups.

Many negroes eventually become the trusted men of their masters, who put them in charge of caravans or even of responsible missions. Thus, the amenokal Moussa had a trusted negro, Chernach, whom he regarded highly, for, he said, "I know that this man would have himself killed for me." Moreover, he gave him a gun, a spear, and a saber. /33/ These negroes are very happy and can consider themselves as freed.

Should one see here some agreement with what we have read in Dozy, or might the uran have been a "totem" among the Tuareg, as among the Redskins of America? 114 825

Nobles do not eat the "dobb" (star lizard) either, which is called "aguezzeram" in Tamashek. As a reason for this abstinence, they quoted me these two lines of nine syllables: 262 565 825

Our ekcher' aguezzeram idit [539]
Iladhou ichchaden ilir'it.

This means:

"I do not eat the aguezzeram because it smells bad and has a rough skin" (1).

1. Iladhou is put instead of "ili adhou." Similarly, ilir'it is put for "ili ir'it." Ir'it, plural ir'ten, means hide (of beef, camel, etc.).

Finally, they firmly refuse to eat chickens and eggs, and chickens are found nowhere among the Tuareg, except among some "harratine" /Haratin/ Arabs of the Ahaggar villages. [231] They claim that this abstinence dates back for a long time. Azioue1 ag Ser'ada when pressed ended by telling me that it was because chickens seek their food in manure. In the Niger, according to a study by officer-interpreter Merle, the French are called egg eaters. But I believe that the following is the real reason for this abstention: The Tuareg, like all the Berbers, had embraced Kharijism. Among the chiefs who took part in the insurrection of the Kharwarij /plural of Kharijite. Ed./ was Tarif, who made the first invasion into Spain (the city of Tarifa still bears his name). His son Salih, or Salah, claimed to be a prophet and composed a new Koran. Elijah, or Elias, son of /62/ the latter, openly remained Moslem, and it was only Salih's grandson, Jonah, or Younes, (end of the eighth century), who spread the new doctrine, which was a much modified Islamism. According to one of the precepts of 262 565 825 773

233 /85 cont./ When the Tuareg want to recapture some of these animals, they organize veritable battues and must use a great deal of cleverness and energy to succeed. It is necessary to break these donkeys in order to fit them for domestic use, for many of them are born wild.

It is estimated that there are 5,000 donkeys in the Ahaggar, but this figure is certainly too conservative.

[262] The flesh of the donkey is not eaten, nor is the milk of the female drunk.

A few horses, most of them originating in the Sudan, are to be found in certain agricultural centers. A "luxury" animal, the horse (aïs) cannot live off the Ahaggar pastures. When well nourished with barley, it bears the climate perfectly well and can be used as a mount in the mountains of the Ahaggar where water points are numerous.

Lastly, chickens are raised by the harratin in all the
• 231 agricultural centers; they are lean fowl which find practically all of their own food. The harratin chiefly eat the eggs,
[437] rather rarely the meat, which is sold to the Europeans.

/87/ IV

Material Life

Dwelling

342 The Tuareg, as true nomads, use the tent for habitation,
281 and sometimes, in exceptional circumstances, the zériba.

The Tuareg tent is made of skins sown together and specially prepared. Its red tint, which harmonizes with the dominant tones of the Ahaggar landscape, is agreeable to the eye. For making the tent (éhakit), goat, sheep, wild sheep, and, very rarely, cattle skins are used; the skins of wild sheep are considered the best. After being stripped of its hair, the

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8. An abankor.

[p. 193]

6:Blanguernon Y-5 (1937-1954) 1955 MS25 Tuareg MS25
Hoggar

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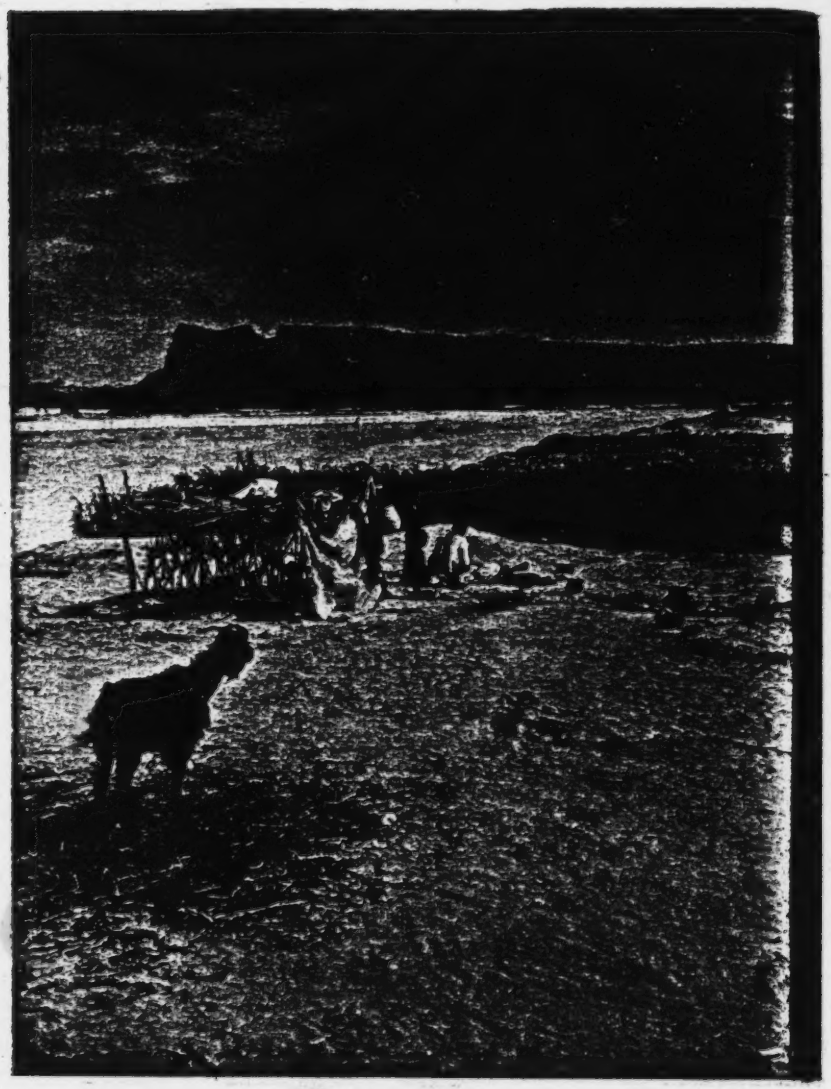

27. A jeriba near a wheat field.

[p. 214]

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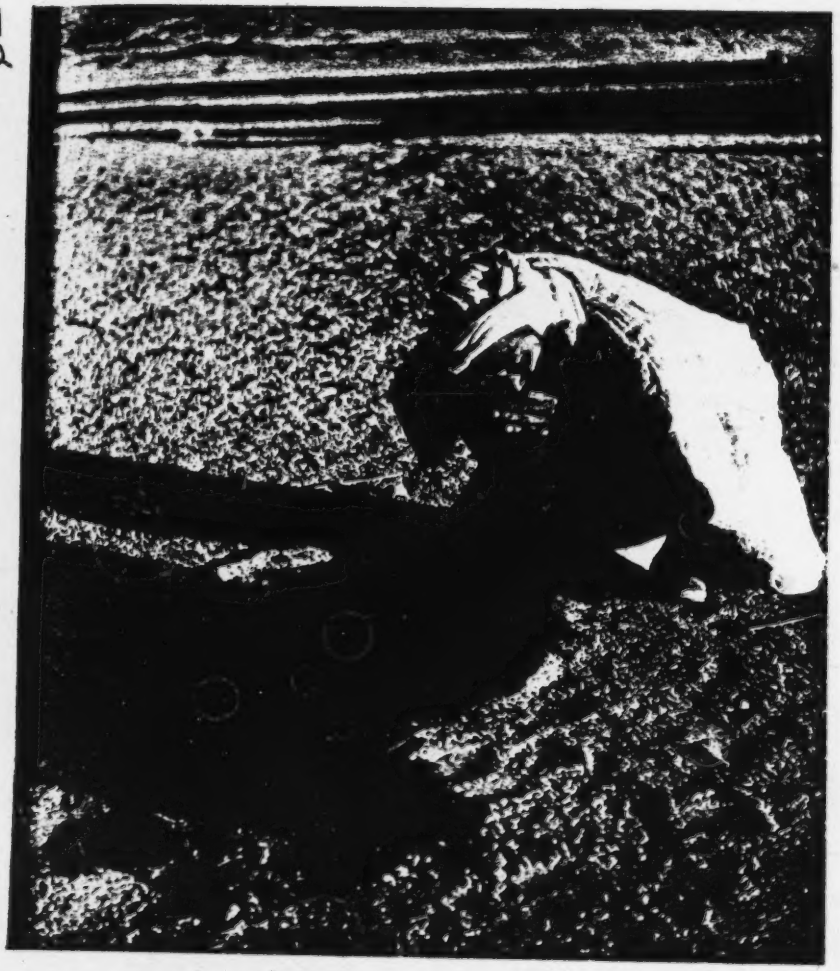

51. After killing a goat, one blows in the skin to loosen it.

[p.239]

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

of riders and their camels. This is intimated by the following poem quoted from Foucauld's excellent books on the poetry of the Ahaggar Tuareg:—

Ébeydeg, é ti n ami mellen	My white camel, O woman with white teeth
W-allahi! iḍeg ul ifel kem	I swear by God, it shall not go raiding, shall not leave you
Ula daṛ ikk am akal ien	It shall not go away from you to another country
U t ḍineṛ ar y arabuh ennem	I lead it to the pastures only to visit you with love again
Ula taharġit d asemmeḍren	Neither in dreams nor in thought
Innin é ham yekk akal ien	Shall it go away from you to another country

(cf. Foucauld 1925-30, I, p. 210 f. for a literal translation).

DONKEYS

231 Donkeys are very important domestic animals in the Tuareg groups I have studied. Most animals are grey or greyish but there are other colours for which the Tuareg have special terms. From Ahaggar the following colour-terms can be mentioned:— *adebara* (greyish), *afawa* (greyish with a white stomach), *ewriṛ* (yellow-brown), *éhenbey*, or *takenbawt* (donkey with a black head), *ékawél* (black). Black donkeys seem to be more common among the Arabs of the Northern Sahara than among the Tuareg.

231 136 Donkeys vary less in colour than other domestic animals among the Tuareg. It is interesting to note in this connection that there are fairly big herds of wild donkeys, or asses, in the mountainous massifs of Ahaggar, Tasilé-n-Ajjer, and Ayr. These animals are generally greyish like most domestic donkeys.

Fig. 83. Women carrying cereals in skin bags loaded on donkeys. Ahaggar, the *Dag Rali* tribe.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

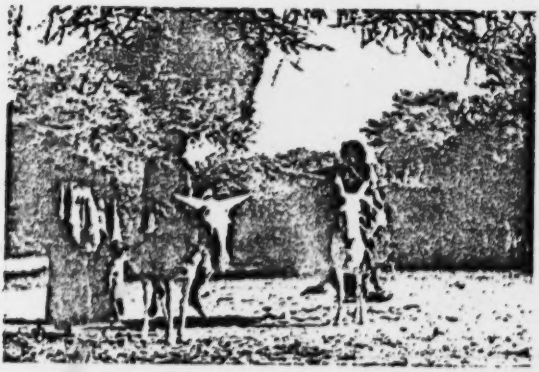

Fig. 84. Boy and woman mounted on donkeys. Ayr, the *Imezzureg* tribe.

But the wild animals are bigger, which the Tuareg ascribe to the fact that they roam freely in the desert and always can find the very best fodder – an explanation which seems reasonable as the Tuareg camp where fodder is reserved to their milk-yielding animals (cf. p. 491 ff.). It can be added that domestic donkeys are frequently tightly hobbled by means of a narrow rope (*téffart*) around their forelegs (Fig. 45) and sometimes also with another rope (*amahus* in Ahaggar) running from one foreleg to a hind leg.

If donkeys are not hobbled, there is always a great risk that they will disappear in the mountains and join the herds of wild animals. Unhobbled donkeys are often caught with great difficulty. They are sometimes driven together by the inhabitants of a camp, and when mares have foals it may even become necessary to run down the foals on riding camels in order to get hold of their mothers. In some regions where donkeys depend on water from deep wells it is customary not to give them too much water to drink, in which case unhobbled animals can always be caught at the well, where they will wait for water. But donkeys are very well fitted for desert life. They can do without water for several days even when weather is extremely hot, and where water is very near the surface so that the sandy soil is humid donkeys dig small holes with their hoofs to drink the water which quickly gathers in these depressions. I have myself witnessed this in Ahaggar where the Tuareg say that among domestic animals only donkeys are able to make such water-holes.

The Tuareg distinguish between the domestic donkey (*éyhed* in the north, *éyjed* among the Ayr Tuareg) and the wild donkey or ass (*ahulil* in the north, *émedrer* in Ayr), but they are well aware that there is no important distinction between them for many Tuareg even nowadays obtain domestic donkeys by catching wild animals. Wild donkeys or asses were hunted for domestication still more eagerly in the past, and there may perhaps be some connection between donkey-breeding and true hunting – that is hunting for meat. Nowadays the Tuareg never eat donkey's meat, nor do they utilize the skin of these animals. But it is known that the Ahaggar Tuareg have eaten donkey's meat in periods of hunger even fairly recently, and Duveyrier states that old animals caught in traps are killed for their

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

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Fig. 85. Tuareg breaking in a young newly-caught donkey. The donkey is prevented from escaping by means of hobble-ropes (*téffart* and *amahus*) and is also tethered to an acacia tree. Ahaggar, the *Aguh-en-tehlé* tribe.

●231 262 237 [175] skin (Duveyrier 1864, p. 231). It is most possible that the taboo on donkey's meat and skin is due to Islam – meat of donkeys and horses is considered unlawful by the Ḳoran. Leo Africanus states that the nomads of the Sahara eat meat of donkeys which they catch in snares (Leo Africanus II, p. 944).

136 224 The wild donkeys, or asses, of Tuareg countries are very shy, and it is most impressive to watch a herd of some twenty animals galloping over the desert plains. Because of their shyness they are often hunted much in the same way as game animals. Among the Northern Tuareg they are caught in the spiked wheel-trap, are run down by men mounted on camels, or are driven into closed river valleys surrounded by steep rocky walls. In certain parts of Ayr wild donkeys can be caught in the same way – notably in valleys of Mount Tamgak (Northern Ayr) and around Anu Meḳḳeren (Central Ayr) – while the method of running down wild donkeys with riding camels is said not to be practised. Whether the so-called spiked wheel-trap is used for catching donkeys or not, I do not know, as the Ayr country is very extensive and inhabited by Tuareg of different origins. The Tuareg belonging to the *Kel Ferwan* group claimed that it was not used for donkeys or asses for which they have a kind of snare called *tuṛunt*, which is also the name used among them for the noosed rope connected with the spiked wheel-trap. The snare used for donkeys is said to consist of a rope some twenty or thirty metres long and plaited from dum palm leaves. The rope is noosed at one end to be used as follows:— The loop is laid out where donkeys come to drink, the whole rope being covered with sand. The hunter lies hidden behind some natural object, a rock or tree, and when a donkey puts one of its legs within the loop he pulls the rope. It is said that this method is also sometimes used for other domestic animals which have gone wild, as happens frequently with oxen. But it is never used for hunting proper game animals such as gazelle, antelope, and barbary sheep. To catch domestic animals which have gone

[283] [23] 231 224

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

wild the Ayr Tuareg also know another type of snare, or rather lasso, which is also known as *turunt*. It consists of a long rope noosed at one end, but the loop in this case is thrown against the animal by means of a short forked stick. The *Kel Ferwan* Tuareg say that this type of lasso is not widely found among them, and claim it is typical of and traditional for the pastoral Fulani, who use it to catch cows which are difficult to approach.

The wild donkeys caught for domestication are young animals, for very old ones cannot be tamed. When an animal is caught by one of the above mentioned methods it is beaten a heavy blow between the ears so that it falls unconscious to the ground. It is thereupon given a rope around its mouth, for wild donkeys are fierce and have a dangerous bite, and is also tied with ropes around its legs so that it cannot run. When the animal comes to after the blow it is led to the camp where it is tethered. It remains tethered and fitted with hobble-ropes in the camp for one or two months during which period it gets a very brutal treatment. It is trained for riding by the men who mount it daily during this period of training (cf. Fig. 85) until it can be ridden as freely as domestic donkeys. The Tuareg say that not all donkeys survive the heavy blow on the head but that most of them do.

Donkeys constitute the important riding animal of all vassal women, and there are also some men of the true vassal class who ride donkeys though most of them have riding camels. Donkeys are also extremely important pack-animals. They are used by most Tuareg for the transportation of tents and

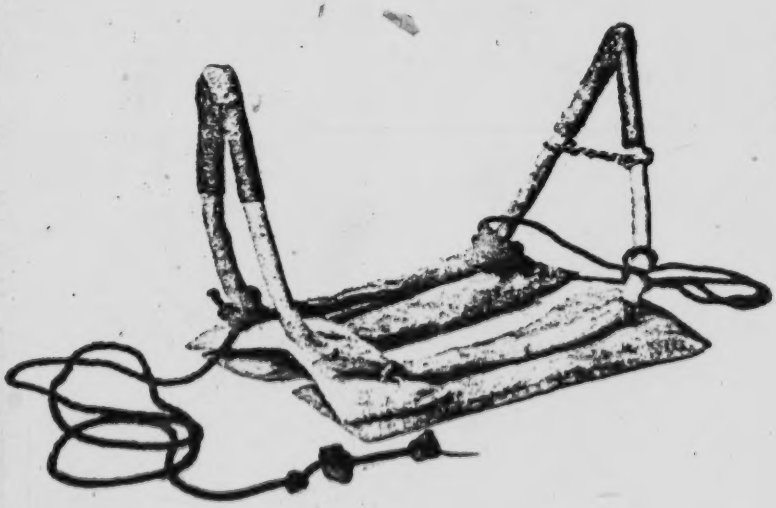

Fig. 86. Donkey saddle (*oruka*) of the type described in detail in the text (cf. p. 110). It is fixed to the animal by two cords of goat's hair: the girth (left), the cord passing under the tail (right). Ahaggar, the *Dag Rali* tribe. Dimension: 0.585 m long, 0.360 broad. (N.M. G. 5246).

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

household goods during nomadic migrations, and are employed daily in all camps to carry water in skin-bags from wells and waterholes to the tents. They are very strong animals considering their low stature, and good pack-donkeys can carry up to one hundred kilograms even for very long trips. Donkeys are occasionally used for long journeys by the Northern Tuareg, and many Ayr Tuareg use them to fetch provisions of millet around Tanut in Damergu. Caravans of donkeys are frequently observed in these regions, and one even sees mixed caravans of donkeys and camels. There can be no doubt that before the introduction of the camel the donkey was still more important for riding and transportation than is the case nowadays. This is clearly demonstrated by historical material from Egypt and adjacent regions (cf. Erman 1922, p. 518 f., 529, 592 f., 636).

It has already been mentioned that donkey's meat and skin are not utilized nowadays by the Tuareg. The same is true of mare's milk which, however, is used as a remedy against a kind of cough known to the Ayr Tuareg as *khamkham*. There is no regulation of mating for donkeys which in many ways are semi-domesticated animals. In Ayr male donkeys are never castrated, while the Ahaggar Tuareg say they castrate such stallions as constantly run after the mares and in this way cause too much trouble. The Tuareg also have no methods to prevent foals from sucking, while a method of this kind is sometimes applied by sedentary people in and around Agadez. This method known as *éfinjar* consists in the cutting of the nostrils of half-grown foals so that they cannot suck pregnant mares. Both stallions and mares are used for riding and transportation, but female animals are much preferred for these purposes. Mares are used almost exclusively for the transportation of water-bags hanging under the animals, as the bags might be squirted by stallions' urine.

The Northern Tuareg saddle their donkeys, using the same saddle type for riding and for transportation (Fig. 86). This is known as *aruku* and is manufactured by the women in the following way:— Two fresh boughs of the *tahunek*-tree (*Rhus oxyacantha*) are heated, or slightly burned, over the fire. The boughs are thereupon barked and bent into the curved form wanted, and are then kept in this position by cords. After drying for a few days the boughs will retain their curved form, and the cords are untied. The boughs are then cut up and their ends are connected by two pieces of camel's hide soaked in water, and sewn together by means of a large iron needle (*tasugla*, or *tasubla*) (cf. Fig. 220b) and a thread which is also cut from camel's hide. The wooden saddle frame is attached to three cushions. These cushions are generally made of goat-skin or sheep-skin stuffed with hay or with date palm bast, but may also be plaited from leaves of the date palm tree. Cushions made from goat-skin are sewn together with strips of the same material by means of the little awl known as *tistent* (cf. Fig. 218a). The two long cushions resting lengthwise upon the animals back are known as *tastek*, and the small cushion resting over the animal's back close to its shoulders is called *tafelledut*. The saddle is fixed to the donkey by two girths consisting of cords made of goat-hair. One of these cords (*tidmechart*) passes under the tail, the other (*ahayif*) is tied around the chest of the animal. This saddle type is well fitted for the transportation of burdens and in particular of water-bags, the cords of which are attached to the pommels. When the saddle is used for riding it is frequently covered with a blanket or a piece of cloth. Saddles of this type are found in all camps of the Northern Tuareg, and Lhote states that they are also found in Adrar-n-Foras and in Ayr (Lhote 1947a, p. 120). This may be so but I have myself never seen them in the latter region where they are unknown to the *Kel Ferwan*

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25
Hausa MS12

T *492 Tuareg. Some Ayr Tuareg use a kind of saddle for the transportation of water-bags. It consists of two pieces of wood with grooves to support the cords of the water-bags; it corresponds to the type of saddle described and depicted by Lhote from the *Iullemmeden* (Lhote 1947a, p. 114, 134) which type I have seen also among the *Kel Tahabanat* of the *Kel Ataram* group. However, most Ayr Tuareg do not employ this device. They content themselves with a layer of thin green twigs placed on the donkey's back so that the cords of the water-bag, which hangs under the animal's belly, shall not hurt and gall. T [484] This method is also sometimes used by Northern Tuareg. To transport the tent and its belongings during nomadic migrations, the Ayr Tuareg use one or two rolled-up mats of the tent-covering for saddle, while on trading expeditions to Damergu they place their skin-bags filled with millet directly on the donkey's back. Such bags (*alehu*) may also serve as a kind of saddle for luggage. When the Ayr Tuareg ride donkeys they sit on the naked back, on a blanket, or on a piece of matting. T [171] The Tuareg never use bridle, bit, or rein for riding as do some people of the northernmost parts of the desert and the Atlas. They control their donkeys with a short stick and constantly beat them over the neck to keep up their speed. I have never seen them prick the animal's neck with a spiked stick as is frequently done in the Atlas and adjacent regions. Here many donkeys wear iron shoes which are also unknown among the Tuareg.

HORSES

T ● 231 Horses play a very small rôle with the Tuareg I have studied. There are very few horses in the Northern Sahara where they are bred mainly by sedentary people who are able to feed their animals on barley, [171] millet, and other garden products. [565] Some years ago there were a few horses in the noble *Kel Rela* tribe of Ahaggar, but nowadays there are no horses among pastoral Tuareg of this region, and in all Ahaggar

H 291 492 531

Fig. 87. Hausa Negroes with their richly ornamented riding horses. Ayr, the *Imeggedesen* of Agadez.

7:Nicolaisen E-5 (1951-1962) 1963 M525 Tuareg MS25

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Fig. 88. Riding saddle of the type manufactured at Agadez and used by horse-riding Tuareg and Negroes in Ayr and further south. Note the very narrow stirrups which are often used for the insertion of only one or two toes. (Musée de l'homme, Collection Henri Lhote, 38/617).

231 [563] there are perhaps less than ten horses which are all owned by sedentary people (blacksmiths and Arabs). Conditions for horse-breeding are better in Ayr, but even there pastoral Tuareg do not generally breed horses which for a large part of the year must be fed on barley, millet, or on milk. In Ayr, [563] horses are mainly bred by sedentary Tuareg of the *Kel Ewey* group and by the negroid citizens of Agadez who hold horses in very great esteem. There are perhaps 100-200 horses in and around Agadez, where the animals are kept in or at the houses most of the year to be fed on cereals and on hay of annual grasses cut with a sickle (cf. Fig. 143 f). During the period of *akasa* it is common to let the animals graze on annual pasture, and they are then very tightly hobbled. The Ayr peoples use a bit *492 [171] (*arabe*) (Fig. 89) similar to the type used by Arabs in the North, but their saddles are not of the general Arab type (cf. Fig. 88). The very broad Arab stirrups also seem to be unknown to the *Kel Ayr* and to the *Kel Geres*, who have many horses. The stirrups used by horse-riding Tuareg are generally very thin and slender, and they are frequently used for the insertion of only one or two toes. [13] The riding-gear used by the *Kel Ayr* (including the *Imeggedezen*) and the *Kel Geres* is described in detail in literature (cf. Foureau 1905, III, p. 879 ff. & 921 ff.). This is very complete, and was, perhaps, [175] introduced fairly recently, for we know that the Libyans of Antiquity rode without a saddle and governed their horses mainly by means of a stick (Bates 1941, p. 96 f.), and we are informed by Ibn Batutah that in the Middles Ages the people of Ayr rode without saddles (Ibn Batutah IV, p. 442).

231 174 The history of the horse in Africa constitutes a very important problem. It is generally admitted

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Fig. 89. Horse bit of iron. Made by blacksmith of Ayr, Agadez. Dimension: ca. 0.11 m broad. (N.M. G. 6667).

that the horse was introduced to Egypt with the Hyksos invasion about 1700 B.C. From Egypt it 231
spread to other African peoples, and it was common among the Libyans during the reign of Rameses 174
III (about 1200 B.C.). This first horse-breed introduced among the North African Berbers seems to have been of the pony type (cf. Bates 1914, p. 96 *f.*; Adametz 1920, p. 46 ff.; Antonius 1922, p. 284) which is still represented in Africa. I believe that the so-called Togo-pony which is found in scattered and isolated parts of the Western Sudan belongs to the old pony-breed, though this theory is not accepted by Doutressoulle on the ground that such ponies are not found nowadays in North Africa and Egypt (Doutressoulle 1947, p. 238). Doutressoulle has made a detailed study of the horse-breeds 231 ●
of the area formerly known as French West-Africa. Apart from the pony-type just mentioned above, 171
there are three main types:— (1) the *Aryen type* known in Ayr as the Begzen horse. It is an Arab breed [114]
introduced from the North – from Tripolis according to tradition. Horses of this type are found scattered throughout Ayr, Aḍraṛ-n-Foṛas, and Hodh. (2) the *Barbe type* found mainly among the Moors west of Timbuktu. (3) *the Dongolawi type* mainly found to the east of the Niger (Doutressoulle 1947, p. 237 ff.).

Horses become valuable riding animals to many Tuareg living in the true savannah country. The 492*
Kel Geres Tuareg use horses for short riding trips though they prefer camels for riding on long journeys. They claim horses of the Begzen breed to be the very best riding animal. In the remote past when the 492*
horse was introduced into North Africa and the Sahara, horses may have been important also to 174
Libyans and Tuareg living further north in the desert, where the climate may then have been more favourable to horse-breeding than it is in modern times. Lhote has studied the ancient rock-pictures representing horses, horse-riders, and horse-drawn waggons in the Sahara, and he ascribes to the horse very great importance for the opening up of the desert country and invasions into these regions by fair-skinned Berbers (cf. Lhote 1953a). This theory is perhaps supported by the fact that the Ahaggar [192]
Tuareg though they do not breed horses have a fairly extensive vocabulary connected with horses and horse-breeding. Briggs states as his opinion that horses were probably never common in the Sahara (Briggs 1960, p. 21). This, of course, we cannot know, but it seems safe to say that in the Sahara the horse has never had the same economic value as the camel later has had.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

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Fig. 90. Tuareg dogs of the breed which is common among the Ayr Tuareg. Dogs suffer much from heat in summer when they hide under water-bags. Ayr, the *Imezureg* tribe.

DOGS

231 The Northern Tuareg distinguish between three types of dogs (sing. *eydi*) as follows:— (1) a long-haired breed (*aberhoh*); (2) a short-haired slender breed (*akhamí*); (3) a very slender and elegantly
[173] built greyhound (*oska*) (Fig. 91). The Ahaggar Tuareg speak of a tradition, according to which the greyhound (*oska*) was introduced fairly recently through contacts with the Northern Arabs. The Ayr Tuareg do not make similar distinctions between dog breeds. They have only one breed which is known as *iffi* (Fig. 90). It is short-haired and slenderly built though less so than the true Arab greyhound.

[136] Dogs are kept to guard the camp and in particular to protect the animals from the attack of jackals or hyenas during night. If the Tuareg had no dogs it would be most difficult for them to breed goats and sheep. Dogs may also follow the flocks in daytime to protect the animals against beasts of prey, though this is not generally considered necessary. Dogs are not trained as "sheep-dogs", but it is said that a few "intelligent" dogs will assist the herdsman in keeping the flock together during grazing,
[224] and many dogs will drive away domestic animals which belong to foreign flocks. Some Tuareg use dogs in hunting barbary sheep, gazelle, antelope, and hare (cf. hunting, p. 159, 166).

[17] It is well-known that the Arabs consider the dog an unclean animal. This is also so among Arab nomads of the Sahara, but they do not consider their greyhounds unclean in this sense. Thus pastoralists of the Chamba group told me that among them a fine greyhound is esteemed in much the same way as are noble riding horses and camels. The Tuareg have very few true greyhounds and
[521] I do not believe that they have this same feeling of interest in them. But many children and young
[541] people are fond of all types of dogs, and one can hear them discuss the qualities of their animals and the daily dogfights which are considered a kind of entertainment to everybody in the camp.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

the daily dogfights which are considered a kind of entertainment to everybody in the camp. Colour-terms are also used for dogs, and I have heard one Tuareg boy claim that he preferred dogs that were black and white. Adult people in general treat dogs differently, and they are frequently cruel to them, which may be due to Islamic influence which is on the increase among the Tuareg. Though the Tuareg may be cruel to their dogs they acknowledge that they are very "wise and intelligent". They say that the dogs are much like humans with the exception that they cannot speak. Therefore they should also be fed like humans, and they are given millet-porridge – with milk if the yield is abundant. The Tuareg kill their old and superfluous dogs by hanging them from a tree in a noosed rope, and they consider this method very effective.

CATS

The domestic cat is found in many Tuareg camps. It is generally termed *muchch* which is Arabic by origin. I believe that domestic cats have been introduced to Tuareg countries later than the Arab invasions and that they have been introduced by the Arabs. This is in agreement with Lagercrantz's statement that domestic cats in most parts of North Africa outside of Egypt are post-Arabian (Lagercrantz 1950, p. 65). Cats are allowed to live in tents and huts, and are well treated as among the Arabs. The Tuareg keep cats not only for pets to their children, but they much like to have them in their camps as cats catch numerous scorpions and also attack snakes.

Among sedentary people of Ahaggar and particularly at Tamanṛaset the hedgehog (*ékenisi*, or *iékenisit*) is sometimes kept in the house or within the courtyard as it hunts beetles and scorpions during the night. This custom of keeping tame hedgehogs is no doubt recently adopted from Europeans living at Tamanṛaset.

Fig. 91. A true greyhound (*aska*) patted by a negroid agriculturist of the *Kel Ganet*. Tasilé-n-Ajjer, the *Ureyen* tribe.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25
Fulani MS11

T 231 ● 171

The most dangerous African cattle disease is the rinderpest. It is known to have entered Egypt in the year 1884 from the regions around the Black Sea, and about 1890, or somewhat later, it came to Eastern Africa and to the Sudan. Rinderpest is nowadays widely found in Africa but it is rare or unknown in Northern Tuareg countries. Rinderpest is apparently very rare in the Ayr Massif and it occurs mainly south of the Massif in savannah country. The Tuareg have no remedy against this disease. It is stated by St. Croix that the Fulani of Northern Nigeria once deliberately exposed their cattle to mild rinderpest to make them immune from this disease in its more severe and dangerous form. However, this method did not work and the Fulani gave up further experiments of this kind. It is also mentioned by St. Croix that the Fulani practise a kind of vaccination against cattle pleuro-pneumonia and that this is done as follows:— A piece of infected lung is put into milk for two to three days and thereupon placed into a small opening cut under the nose-skin of the animal. The method is claimed to be effective (St. Croix 1944, p. 24 f.). Vaccination methods are also known to some of the Southern Tuareg, e.g. the *Iwillemmeden*. These people vaccinate human beings against small-pox by inserting the pus of this disease into wounds cut with a knife (Aymard 1911, p. 108), and they also vaccinate their cattle against cattle pleuro-pneumonia ("peripneumonie bovine"). They do this in much the same way as described above for the Fulani:— An infected piece of lung is placed in sour milk or in the soil for a few days, and is thereupon inserted under the skin of the forehead. Nicolas describes the method as dangerous because the infection attacks the whole forehead and also the nose-bone (Nicolas 1950a, p. 133), but two veterinary surgeons who practised among the *Iwillemmeden* of Tawa told me that they considered this kind of vaccination effective. The method is unknown among the Ayr Tuareg of the Massif where this contagious lung-disease is unknown or very rare.

T 232 F 232

T 232 [751]

I have no great knowledge of the contagious diseases in the Tuareg groups I have studied, but such diseases seem to occur comparatively rarely, and there is no veterinary surgeon attached to the French administration of Northern Tuareg countries. There is one veterinary surgeon in Agadez, but his most important field of work lies outside of the mountain massif to the south.

T 231 648

Among the *Kel Ferwan* Tuareg of Southern Ayr I have been told about two contagious diseases which, when they occur, may give rise to very heavy losses. One of these diseases is known to the Tuareg as *charga*. It attacks only cows, which die very quickly, but if cattle suffering from the disease are ritually killed their meat is nevertheless considered edible. One Tuareg told me that some years ago about thirty cattle of his camp died in one day from an attack of *charga*.

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The other contagious disease I have recorded from Southern Ayr is called *tandert*. It attacks sheep and goats, and I collected the following notes about it:— The blood penetrates the animal's flesh which becomes quite red. If sheep or goats suffer from *tandert* and are ritually killed for eating, very great care must be taken in the preparation of the meat. It must be boiled until it contains no blood, and must not be eaten until it is cold and dry. It is said that if these precautions are not taken the people who eat meat from animals suffering from *tandert* will themselves become attacked by the disease, with the result that blood and pus may penetrate the skin at any part of the body. They say that a man who has eaten unboiled meat of an animal suffering from this disease with consequent infection is treated in the following way:— A species of ant more venomous than the normal small

T 233* 262 252 T [753] T 759

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

ants is collected and put into the millet mortar and pounded. The pounded mass of ants is then placed on the affected individual at the spot where blood and pus have penetrated the skin. The disease is characterized as very dangerous for human beings as blood and pus may emerge at any place of the body, and can, for instance, destroy an eye. The Ayr Tuareg say that they have no remedy against *tandert* when it affects their sheep and goats. The disease *tandert* can hardly be anything but anthrax. According to information from the veterinary surgeon Niels Grunnet much indicates that the contagious disease *changa* is also anthrax.

Foucauld has recorded a few contagious stock-diseases from Ahaggar:— *tarut*, a lung disease affecting cattle, goats, and camels. The lungs are filled with pus, and the animals die in four to ten days. *tehareṛet*, a disease attacking sheep and goats which will die with yellow entrails. *weñhet*, a contagious disease attacking jackals, dogs and related animals which will die quickly. It is not the true rabies. *talekmet*, apparently a kind of scrofula which affects the udders of female domestic animals. These do not necessarily die from the disease but their udders may wither (Foucauld 1951–52, IV, p. 1558, 1663, III, p. 1509, 1044). Dr. Grunnet has informed me that *tarut* could be the pulmonary form of *pasteurellosis* also called *haemorrhagic septicaemia*, while *weñhet* may very well be distemper. The *talekmet* disease according to Dr. Grunnet is not easy to identify by the present information, but three conditions are possible:— 1) cow pox, 2) *actinomycosis* of the udder, and 3) *mastitis*. The Ahaggar Tuareg, like the Ayr Tuareg, do not seem to have any remedies against such contagious diseases which incidentally are rare. But there are many other stock-diseases and treatments for them.

The Ayr Tuareg have mentioned to me about thirty different names of camel diseases. The description of these diseases was frequently difficult to understand, and I noted only the following names:—

azni, that is a disease of congestion due to heat-apoplexy which is cured by bleeding with a knife or with tobacco powder put into the camel's eyes.

tadanak, an eye disease cured by cutting around the eyes and by the insertion of salt.

ichilchal, a nose disease cured in the following way:— The handle of a wooden spoon is put up through the nostril to pierce the septum, and heated butter is poured into the animal's nose.

inefdan, a diseases which gives the camel a swollen and inflamed head. A cure is effected by cutting with a knife and by burning.

toza, a kind of chill which causes pregnant she-camels to miscarry. There is no good remedy for it, but it is normal practice to pour water over the affected animal.

lejwad, a paralysis of the hind thighs of camels. The affected animals cannot stand up. The only remedy is a very difficult operation:— A vein is opened in the hind thigs to let out a great quantity of blood. Bleeding is stopped again by sewing together the cuts, which are finally treated with fire.

tibayaḳ, a disease which prevents the pregnancy of mated she-camels. The remedy for this consists in cutting slices around the vagina and under the tail so that blood flows. After this operation, which I have frequently attended, it is said that she-camels will become pregnant when mated.

sanes, a disease which prevents the pregnancy of she-camels. It is treated by putting the hand and the arm deeply into the anus of the camel. I have seen it performed once, and in this particular case the she-camel became pregnant shortly afterwards. According to Dr. Grunnet this disease is very probably *corpus luteum* which is squeezed out of the ovary by the manipulation.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

human beings, and in the past was used by the Tuareg to poision their enemies. However, this plant does not seem to be venomous for domestic animals which grow fat from eating it (cf. Maire 1933, p. 192). One plant (*téhéréggelé*) (*Artemisia judaica*) is said to have an intermediate position: When camels eat its green shoots they may contract entrail diseases, but the plant is also considered a remedy for entrail worms. Domestic animals which have eaten venomous plants are generally treated with liquid butter which is poured into their mouths. Venomous animals are also very dangerous for domestic animals, notably scorpions and snakes which abound everywhere. The treatment of swollen limbs caused by snake bites or scorpion stings is sometimes bleeding, but the Northern Tuareg also consider it effective to give the affected animal fat from a female barbary sheep and to place a little fat over the place where the animal has been bitten or stung. Under this heading of veterinary medicine mention must finally be made of the fact that tobacco is considered to possess curative qualities in the case of certain diseases. When camels get tired and slow owing to congestion during the hot summer season the Tuareg consider it an excellent remedy to put, as mentioned above, powdered tobacco leaves in the animals' eyes. This was frequently practised with my own camels, and it seems to me that the method is efficacious.

It is evident that many veterinary methods among those mentioned above are effective, and I believe that Tuareg veterinary methods are largely to be considered rational. It is a true that it is most difficult for an anthropologist without any veterinary training to judge objectively the value of all treatments of stock-diseases. But French veterinary surgeons I consulted at Agadez held the view that the Tuareg methods they knew of were effective, though in specific cases of disease they could do better than the Tuareg, and one veterinary surgeon admitted that the Tuareg knew far more about camel-diseases than did modern veterinaries. It can be added that the Tuareg possess an anatomical knowledge of their animals which is no less than astonishing. Apoggi has noted 43 terms used by the Tuareg of Tasilé-n-Ajjer to describe the exterior parts of a camel (Apoggi 1933), and this list is not complete. It goes without saying that the Tuareg also have a large vocabulary for internal organs which they know in detail from slaughtering. And I believe they have a fairly good knowledge of physiology.

I have elsewhere given some information of Tuareg medical methods applied to human beings (Nicolaisen 1961; cf. also Humann 1933), and I have stated that Tuareg medicine cannot be understood entirely without reference to religious and magic beliefs. This is to some extent also true of their veterinary methods. But as far as I know there are many medical methods based on magic and religious ideas which are applied solely to human beings. This may seem quite natural.

Domestic animals may run the risk of being attacked by evil forces such as the evil eye and the evil mouth (*tehot* in Ahaggar; *tugarchet* in Ayr), the *Kel Asuf* spirits, and the mystic power known as *ettama* or *tezma* in Ayr (cf. p. 21), and valuable animals may carry Islamic amulets as a protection against these evils. I have seen such amulets carried by a few rams and he-goats, but they are used particularly for camels, and I believe that most camel amulets are meant to protect the animals from the evil eye (the evil mouth). Against this malignant force camels may also be provided with a donkey's hoof hung around the neck as an amulet. Another non-Islamic amulette is used for riding camels in Ayr:— Some Tuareg of this region hang the foot of a turtle around the camel's neck in order that their riding animal may not stumble.

7:Nicolaisen E-5 (1951-1962) 1963 MS25 Tuareg MS25

Religious beliefs also interfere with Tuareg stock-breeding and create usages of an irrational kind. Thus the Tuareg, like other North African peoples, firmly believe in the mystic benevolent power, or benediction, known as *elbaraka*. This is a power that emenates from God. It is given by God to man and it cannot act unless certain taboos, or rather religious prescriptions, are followed. The benediction *elbaraka* is more than anything else hurt by impurity. Cleanness is an absolute necessity for this good force to be sustained in the same way that a man cannot approach God through prayer if he be unclean. Women are considered unclean during their periods of menstruation and cannot, therefore, then pray to God. They are also forbidden to drink the milk of domestic animals which have very young kids, lambs, or calves, and they must not drink water which has been conserved in newly-made skin-bags. These taboos are maintained in order not to hurt the benediction given the animals by bringing it into contact with impurity. For the same reason milk taken from animals which have recently brought forth young should not be given to strangers – they might be unclean and harm the *elbaraka*. It is also believed that soil is an impurity dangerous to *elbaraka*, and milk must never be spilt on the ground. Even when milk-bowls are cleaned with water, this liquid should be poured out upon plants or stones, and never be spilt on the ground. Should this be done, God will withdraw his *elbaraka* and the result will be severe periods of drought without milk. I have frequently heard Tuareg ascribe the lack of rain and the dry pasture – the lack of *elbaraka* – to the fact that somebody had spilt milk upon the ground. This had caused God to be angry and to withdraw his benediction. Some Tuareg have also said that *elbaraka* is harmed by a person who blows upon milk. When a man drinks milk he must not blow away impurities before drinking but must remove them by means of a piece of straw.

In the two groups of Northern Tuareg and also in Ayr it is considered very disgraceful for a person who watches the animals away from camp to drink milk directly from an animal's udder. Some Tuareg say that a man when staying alone among milk-yielding animals should not utilize their milk even if he performs milking in the usual way. A person who breaks these rules is called *émenkes* or *émelded* among the Ahaggar Tuareg, *émelded* in Ayr. The Tuareg say that there are some people, and in particular many slaves, who do not follow this rule, and that they are despised if known to have broken it. When two or more people are alone with a herd or flock away from the camp they can freely utilize the animals' milk. And it is very normal for camel herdsmen to live with a herd of she-camels in isolated places for long periods. They then live almost exclusively on camel's milk taken from the herd they guard.

Certain usages connected with stock-breeding are rationally explained by the Tuareg. Thus when they heat milk by means of hot stones (cf. p. 221) put into the milking bowl, they claim that this is done in order that the milk shall not get dirty as would happen were it heated in an ordinary cooking pot. Another custom which by other stock-breeders has been explained as being based upon magic, namely the usage not to drink milk and eat meat at the same time, is also rationally explained by the Tuareg. They say that there is no taboo on taking these kinds of food together, but it is very unwise to do so because the mixture will act as a laxative and upset the stomach. Therefore, if a Tuareg has drunk much milk he will not eat meat shortly afterwards, and if he has eaten meat he will not take milk for some hours, though he may do so should ample water have been added to the milk. The Tuareg to my knowledge have no other special customs in connection with stock-breeding and milk than there mentioned

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Fig. 95. A Tuareg feeding his riding camel with *afezu* grass (*Panicum turgidum*). Many Tuareg feed their riding animals with stems of this perennial grass – partly to obtain a docile camel for riding, partly to change its fodder which consists largely of acacias and annual plants. The photograph is taken near Agadez at the *akasa* season. Annual plants grow between trees and bushes (*afagag*, *Acacia Raddiana*; *ebezgin*, *Salvadora persica*; *tadent*, *Boscia senegalensis*). Ayr, the *Isakaranan* tribe.

than those mentioned. Thus they can use any kind of receptacle for milk and milking, and they do not clean their milk-bowls with urine as is normal among certain East African stock-breeders, and, perhaps, also among certain of the Fulani living south of Ayr. The taste of urine is detested by the Tuareg, who know this taste all too well as the water drawn from pools and wells is frequently flavoured with urine and the excrement of domestic animals. Nor is camel urine used by Tuareg women for hairdressing as is done among the Arabs, but it is said that it may have a medical value in curing wounds. The custom of drinking blood has been mentioned above (p. 122 f.) and will be described later (p. 235).

The Tuareg apparently have comparatively few superstitious usages in stock-breeding, which is mainly to be considered rational. We have seen that stock-breeding is adapted to environment, and we have also mentioned that there are veterinary methods which doubtless have their origin in considerable knowledge of the anatomy and physiology of domestic animals. This knowledge forms one corner-stone of rational stock-breeding, and another is the very detailed knowledge of botany. In Ahaggar there are more than 600 different plant species for which the Tuareg have particular names, though a few related species are sometimes known by one and the same name. Every Tuareg know about the ecological conditions of these plants, and he knows exactly their fodder value for domestic animals. He knows that certain plants form excellent fodder for all domestic animals, but he is also well aware that the different types of stock have different needs, so that certain plant species are valuable for camels, other species for other domestic animals.

The Tuareg are occasionally cruel to donkeys, and to dogs, but they take the greatest care of all other domestic animals to ensure their wellbeing and reproduction. Women bring acacia pods or tender annual plants to kids, lambs, and calves, and to sick animals which remain in the camp. On long trading expeditions, when the camels have little time for grazing, some Tuareg will walk along

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start around wells. It may happen, for instance, that two men who draw water from the same well get the ropes of their leather buckets entangled. They will then start to quarrel and the result may be a fight with swords.

I conclude this chapter with a brief description of the signals used by the Tuareg for their domestic animals. As these animals do not have the same needs for food and water and are frequently mixed with each other in camps and around wells, it is only natural that the Tuareg have different signals to call, stop, or drive away their various types of domestic animals. I have noted these signals among the *Kel Ferwan* Tuareg of Southern Ayr:—

Signals to call domestic animals:—

goats	*ay, ay*	
sheep	a rolling sound	the three rolling sounds are somewhat different though resembling each other
cows	a rolling sound	
camels	a rolling sound	
donkeys	*ahay, ahay*	

Signals to stop animals:—

goats	*aw*
sheep, cows, camels . . .	*ör*
donkeys	*as*

Signals to drive away animals:—

goats	*dy*	pronounced emphatically
sheep, cows, camels . . .	*hey*	
donkeys	*aheyt*	

Fig. 99. Tuareg drawing water for camels which drink from a piece of canvas (*tafarawt*) placed over a hollow in the ground. Ahaggar, the *Kel Ahnet* tribe.

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462 Among Northern Tuareg vassals donkeys are tended by women, who use them for riding and
231 transportation over short distances. Tuareg men rarely ride donkeys, but the assistance of men is
[492] needed in connection with some of the tasks of donkey-breeding:—

It may become desirable to increase the stock of donkeys by catching wild animals as already described above. This is always done by men who also break-in the captured animals for riding. The assistance of men is also frequently needed for catching half-wild, though domesticated donkeys.

The marking of donkeys, castration, which is rarely performed, and the curing of diseases, which are also rare, are said to be tasks which should properly be carried out by men.

[565] Vassal women only tend camels when all men are absent from their camp.

The above rules of division of labour are in general also valid in Ayr among the *Kel Ferwan* Tuareg. But there are in Ayr vassal Tuareg who have no camels and vassal men in Ayr frequently ride donkeys. The tending of cows in Ayr is mainly the work of women, who are also more familiar with cattle terms than are the men. – Among the *Kel Ewey* the skinning of goats and sheep, as well as the partition of the meat, are done by women.

428 In the Tuareg groups I have studied both men and women inherit camels, goats, sheep, and donkeys according to Islamic rules of inheritance.

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Fig. 110. The skinning of a gazelle placed upon straw of *afezu* grass (*Panicum turgidum*). Ahaggar, the *Taynak* tribe.

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Wan Abu (Tasilé-n-Ajjer) from the pre-historic cattle-breeding period ("periode bovine"). The picture shows a hunter armed with a bow and hiding behind an ox (?) which is provided with a lead held in the left hand. The hunter approaches an ostrich and perhaps also giraffes and gazelles which are also depicted. This rock engraving was discovered by Lhote, who believes that the stalking animal depicted is an antelope (cf. Lhote 1958, Fig. 69 p. 147, p. 264).

(3) Hunting in disguise. True hunters do not use their ordinary dress of indigo or white colours during a hunt as it is seen by game animals at a great distance. The hunters use preferably a shirt and a head-cloth of yellow-brown colours which resemble the colours of sand and dry plants. I do not know whether other types of disguise are known. It is very likely (cf. Ayr Tuareg below p. 166).

(4) Hunting from artificial hiding-places. The use of artificial hiding-places consisting of walls built of stone is mentioned by Foucauld, who does not explain their use. They are known as *timuyal* (sing. *tamayilt*) (Foucauld 1951–52, III, p. 1179).

(5) Hunting with dogs. Greyhounds and greyhound-like dogs are used in hunting barbary sheep. The dogs surround the animal and prevent it to escaping, so that it can be killed by a hunter with a spear. There are very few greyhounds among the Ahaggar Tuareg, but slender greyhound-like dogs are fairly common (cf. p. 114 f.). The true greyhounds may succeed in running down gazelle, and I was told among the *Kel Ajjer* that greyhound are trained not to kill the game but to bite its legs, and then to return to their master to lead him to the ferociously-bitten animal so that he can kill it ritually. However, most Tuareg dogs are not able to run down adult gazelle. Occasionally they catch young animals of which they are allowed to eat such entrails as are not eaten by the Tuareg. Dogs can more easily catch hares. It is said that some dogs are trained to bring caught hares alive to their masters, but most dogs are not too well fed and therefore eat on the spot the hares they catch.

(6) Riding camels are sometimes used for the running down of game animals. Gazelle can be taken in this way only if they are wounded, and barbary sheep normally graze in mountains inaccessible to camels. But it happens that barbary sheep descend into sandy plains to feed on certain annual plants, and can then easily be taken by camel riders as they get very exhausted when they have to run quickly

Fig. 113. The spiked wheel-trap (*ifetaw*) connected with a noosed rope (*tayant*) attached to a stick. The wheel is made from straw of the *afezu* grass (*Panicum turgidum*) bent into circular form. Small pointed sticks (*iğulan*, sing. *ağula*) are inserted into the straw circle and fixed to it by means of bast of the *absey* acacia (*Acacia Raddiana*) which is wrapped around the straw-wheel and the pointed sticks. The noosed rope is made from date palm bast, but frequently it is also made from *absey* bast. The small pointed sticks are made from twigs of the *azawe* tamarisk (*Tamarix gallica*). Ahaggar, the *Ağuh-en-tehlé* tribe. Dimension of the wheel: about 0.20 m (F.M. 141a–b).

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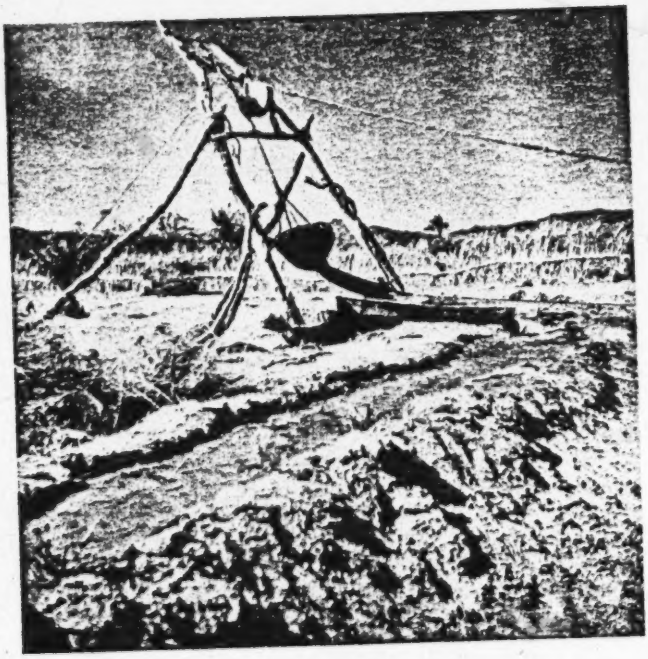

Fig. 132a. The irrigation system known as *tanut*. Ahaggar, Amsel.

settlements contain less than 300 individuals, the majority not even a hundred (cf. Lhote 1955a; p. 292). Most agricultural settlements comprise only a few houses built of stone or mud, or a few straw-huts (cf. p. 327 ff.). The agriculturists of these small settlements generally keep some goats and sheep, have donkeys, which are important beasts of burden to all farmers of the Sahara oases, and in certain families there are one or two zebus to raise water from irrigation wells. A few agriculturists may be characterized as semi-nomads. This is the case of some inhabitants of Abalessa who guard their flocks at some distance from the village. Some of these agriculturists, who were formerly Tuareg slaves, even make skin-tents like pastoral Tuareg.

The subterranean aqueducts known to the Arabs of the Sahara as *foggara*, to the Tuareg as *ifelan* (sing. *éfeli*), constitute by far the most important irrigation system used in Ahaggar. However, these *foggara* canals cannot be compared with the large extensive aqueducts of Tidikelt though their introduction to Ahaggar is due to the immigration of agriculturists from that area. The Tidikelt *foggara* are very large aqueducts which are dug into water-bearing strata which can be situated at a considerable distance from the oasis (cf. Capot-Rey 1953a, p. 324 ff., Lô 1953 & 1954; Chaintron 1958). The Ahaggar foggara are generally very short (about one to two kilometres, or shorter), they are not

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Fig. 132b. Cf. text Fig. 132a.

deep, and are dug into the sandy river bed to lead its water to the gardens of the valley terrace. A map of the foggara aqueducts placed in the river valley of Taṛhawhawt is reproduced by Capot-Rey (Capot-Rey 1953a, Fig. 18 p. 328). There are many advantages attached to the use of foggara systems of the Ahaggar type, for once the aqueducts are dug water automatically flows to the garden. But there are also disadvantages. If a foggara valley is heavily flooded after rains and changed into a roaring stream, the aqueducts are destroyed and the crops also. In general it will be necessary to abandon a foggara system after some years, as it must be cleaned at intervals and in time it becomes too dangerous to work in them as subsidences may occur and kill workers. It may also happen that a river valley is not flooded at all for a period of years when it becomes essential to move to another valley, rich in water under the sandy river bed, to make a new foggara there. For all these reasons deserted foggara systems are common in the river valleys of Ahaggar.

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The *foggara* system is unknown south of Ahaggar and has on the whole a rather limited distribution in the Sahara. One reason for this is perhaps that the construction and maintenance of the aqueduct imply the agricultural co-operation of several households. This is not the case with the other common system in Ahaggar, the use of wells (*tunin*, sing. *tanut*) from which water is raised by animal traction. The wells are usually shallow and not very difficult to dig out, and the maintenance of the whole system is usually limited to occasional mendings of the zebu's harness and of the large waterbag. While a foggara canal is always used for the irrigation of several gardens (6–12), the wells are used for single gardens. The irrigation wells are dug into the valley terrace so that they are not destroyed by a flood, and in dry years watering from wells is considered the better system. But in the period when crops need much water irrigation by means of wells is hard work for the garden owner who must drive his ox all day long.

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Irrespective of the system resorted to irrigation of a garden is done in the same manner. Water from the *foggara* aqueduct or water raised from well flows into a large basin (*tihemt*) through a canal

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Fig. 158. Woman churning butter by shaking the inflated churning-bag (*agiwir*) between her hands. Ahaggar, the *Ajjuh-en-tehlé* tribe.

Meat (*isan*) is not a staple diet of the Tuareg. The Tuareg of Ayr consume more meat than the Northern Tuareg, but even in the south it is not eaten daily. There are Ayr Tuareg who are reluctant to kill their animals, and people who have much milk have very little need of meat. Meat is eaten by all Tuareg on certain festive occasions, whether social or (and) religious, and when camps are visited by friends, certain relatives, and important guests. He-goats and rams, or barren goats and sheep, are the animals most commonly killed. The meat of sheep and rams is considered better than goat meat, and sheep are also highly esteemed for sacrifice. Whenever the Tuareg kill an animal for food

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[text continues on p. 231]

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Fig. 164. Pail (*ɛ̣ṛir*) made from tinned brass by blacksmiths. It is used for storing butter to be used for food preparation in the tent. Pails of this type form part of the dowry in the *Dag Rali* tribe. Ahaggar, *Ahl Azzi* Arabs of Tamanrasset. Dimension: 0.155 m high, 0.230–0.235 m in diameter at the rim. (N.M. G. 5820).

they perform a sacrifice, the idea of which seems to be an identification of the man and the killed animal. This idea appears most clearly at the sacrifice made on the occasion of the name-giving feast seven days after the birth of a child. A marabut, that is a Tuareg of the *Ineslemen* class, and the father of the child stand close together with their faces towards Mecca while the animal to be sacrified is kept to the ground. The marabut cuts the animal's throat and doing so cries out the name to be given to the child, and this name is thereupon repeated by the child's father. When the killing is performed in this way the knife (*elmusi* in Ahaggar; *ɛ̣zegiz* in Ayr) and the cut across the throat are washed with water before skinning is undertaken. I have dealt with certain ideas of Tuareg sacrifice elsewhere, and have stated that on certain occasions they may sacrifice not to God but to the *Kel Asuf* spirits (Nicolaisen 1961, p. 122 f., 147 f.). But whatever may be the ideas attached to Tuareg sacrifices all animals, with the exception of the camel (cf. above p. 65), are killed by cutting their throat.

The methods of meat preparation are almost identical in Ayr and Ahaggar. The most common method everywhere is cooking in an earthen pot, known in Ahaggar as *ufrun*, *tɛ̣ṛirt*, *alekkin*, or *talekkint* according to its size and form, or in a metal pot (*ɛ̣ṛir*) of European origin. Such European pots are common everywhere in Tuareg camps, but earthen pots are still used though less durable, for earthen pots are cheap. Pots made of metal or copper, which are also known as *ɛ̣ṛir*, were also found among

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Fig. 173. Tuareg skinning a ram. Ayr, the *Igendéynen* tribe.

252 by placing the dough on a baking sheet. The other type of bread is generally known by the Arabic word *khubz*. This is baked from dough placed in the sand close to the fire, where it is covered with hot sand, ashes, and glows. These two types of bread in Ahaggar are baked mainly by sedentary agriculturists and by Arab families. The type of bread traditionally baked by the Tuareg differs from Arab bread in that it is not made from proper dough, but from a kind of thin porridge or gruel consisting of flour mixed with water. This Tuareg type of bread is known as *tagella* and is baked as follows:— A heavy fire is lit in a shallow depression (about 25–30 cms in diameter and 8–10 cms deep) made

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as *ahaja* (Fig. 213). Such tanning receptacles are made in the following way among the Ahaggar Tuareg:— A slender bough of the *tahunek* tree (*Rhus oxyacantha*) is bent and fixed into a circular form, and a piece of camel's hide soaked in water is attached to this frame. Sand and pebbles are thereupon placed upon the hide within the frame, which is lifted upwards by means of cords fastened to it and to the bough of a tree. This is done to produce the bowl-like form of the receptacle which is left filled with sand and pebbles and attached to the tree for a few days. Thus it is dried by the sun, and thereafter it will become very hard and keep the desired bowl-like form. Certain butter-containers made from raw camel hide are manufactured on the same principle, the entrance to such containers being made by the insertion of a piece of wood around which the upper part of the piece of hide is firmly attached. The sedentary agriculturists of Ahaggar also use camel's hide for the manufacture of a long rope (*akhawil*), which is used for drawing water from wells by means of oxen when the *tanut* system of irrigation (Fig. 132a–b) is employed. A rope of this kind is made from strips of soaked hide twisted together and hammered between stones to be left for drying in the sun. It is also said that camel's hide in the north is used for sandals of a particular type, while the Ayr Tuareg may use raw oxe-hide for sandals (cf. p. 301). The Ayr Tuareg may also employ raw oxe-hide for the manufacture of ropes and cords, and for camel whips. The hides of camels and oxen are known to the Tuareg by the common term *érit* and they seem to possess certain qualities in common.

The hide of such animals as goats, sheep, gazelle, barbary sheep is never used untanned among the Tuareg, and they may tan the hide of oxen and various other animals.

The Tuareg use a particular method for tanning goat-skin to be used for water-bags (*abayor*) (Figs. 215–217). I have watched this, particularly in Ahaggar, where a water-bag is prepared in the following way:— The animal is killed in the normal way of cutting its throat, and is then so skinned that the hide comes off almost entire. This is done by making the following openings with the knife: the head is cut off, cuts are made around the lower part of all four feet, and on the inner side of the

Fig. 214. Tannin consisting of bark (*ithet*) of the *tamat* acacia (*Acacia seyal*) which is used for tanning water bags. The bark is left upon a piece of rock for drying. Ahaggar, the *Afuh-en-tehit* tribe.

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taḡamayt (*Danthonia Forskalei*). Tr., L.M. a. & p. (cf. Gram 1935, p. 55).
taḡamayt (*Cynodon Dactylon*). Tr., L.M., U.M. p.? (cf. Gram 1935, p. 55).
tayeest (*Eragrostis bipinnata*). Tr., L.M. biennial (cf. Gram 1935, p. 55).
tirakob (*Grewia populifolia*). Tr. p.
awkal (*Cynomorium coccineum*). Tr., L.M.
takkart (*Mentha longifolia*). Tr., L.M. a.
ahakel (*Cistanche Phelypaea*). Tr., L.M.
teḡellet (*Colocynthis vulgaris*). Tr., (a.), p. (cf. Gram 1935, p. 50).
alkeḍ (*Cucumis pustulatus*). Tr.
tawefirt (*Publicaria crispa*). Tr., (L.M.) p. (cf. Foucauld 1951–52, III, p. 1304).
taḡuk (*Artemisia campestris*). Tr., L.M., U.M. p., evergreen?.

In my early notes on donkeys' fodder plants I have three names which I have not been able to identify – due to the fact that I did not then take Tuareg words down in *tifinay*. The three names are *aharowa* (? = *aharay*; *Aristida* sp. & *Danthonia Forskalei*), *anador* (? = *awaddam*; *Plantago ciliata*), and *terforgit*, or rather *terfukkit*.

Maire mentions that the plant known as *ekachchekir* (*Astragalus pseudotrigonus*), Tr. p., evergreen (cf. Gram 1935, p. 64), is very appreciated by donkeys, but less so by camels, sheep, and goats (Maire 1933, p. 128).

FODDER PLANTS EATEN PARTICULARLY BY ZEBUS

tahlé (*Typha elephantina*). Tr. p.
akeyweḍ (*Typha australis*). Tr., L.M. p.
tiserfelt (*Saccharum Ravennae*). Tr., L.M. p.
ayemmud (*Aristida plumosa*). Tr. p.
tayemmut (*Aristida* sp.). According to Maire (1933) this name has the same meaning as that just mentioned above, while I have been told by the Tuareg that *ayemmud* is as high as barley, while *tayemmut* is much lower.
dzeng (*Cyperus laevigatus*). Tr. p.
ilagga (*Scirpus Holoschoenus*). Tr., L.M. p.
talezgit (*Juncus maritimus*). Tr., L.M. p.
aramas (*Atriplex Halimus*). Tr., L.M., U.M. p.
issin (*Salsola foetida*). Tr. p., evergreen.
tayeest (*Eragrostis bipinnata*). Tr., L.M. biennial (cf. Gram 1935, p. 55).

The plants *aramas* and *issin* are important to zebus mainly for their salt content. It will be noted that the species here mentioned as fodder plants of zebu oxen are mainly perennial plants. Many of them demand humid soil, which is found close to most agricultural settlements where oxen are bred by agriculturists. Most of these peoples have only one to three oxen which generally graze tethered near the village. The oxen thus do not benefit much from the rich annual pastures in years of abundant rainfall, but, on the other hand, they are fed with garden-grown plants, as are donkeys of sedentary peoples.

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